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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/622,731	08/21/2000	Omer Shibolet	032/01702	8988
1333	7590	05/05/2006	EXAMINER	
PATENT LEGAL STAFF EASTMAN KODAK COMPANY 343 STATE STREET ROCHESTER, NY 14650-2201			NGUYEN, PHU K	
			ART UNIT	PAPER NUMBER
			2628	

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/622,731	Applicant(s) SHIBOLET, OMER	
	Examiner Phu K. Nguyen	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 53 and 54 is/are allowed.
- 6) ☒ Claim(s) 1-24, 26-28, 41-45, 48-49, 55-59 is/are rejected.
- 7) ☒ Claim(s) 25, 29-40, 46, 47, 50-52 and 60-70 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.


PHU K. NGUYEN
PRIMARY EXAMINER
GROUP 2300

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/21/00 & 9/25/00</u> . | 6) <input type="checkbox"/> Other: _____ |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-24, 26-28, 41-45, 48-49 and 55-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Lorensen et al (U.S. Patent No. 5,61 1,025).

As per independent claim 1, Lorensen et al disclose a virtual internal cavity inspection system comprising a step of providing a medical imaging data set representing a cavity and a boundary (col.3, lines 5-22), a step of providing a plurality of points in the data set including at least a starting point and an ending point (col.3, lines 25-45), and a step of automatically determining a path between the starting point and the ending point responsive to a penalty function defined by penalty values associated with passing through various points in the cavity (col.4, line 39 through col.5, line 15).

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant's arguments filed on October 30, 2003 have been fully considered but they are not deemed to be persuasive. Applicant argues that Lorensen does not teach the "penalty function". Applicant argues that Lorensen's steepest descent, wherein the points are pre-marked based on distance from the endpoint and an optimal path is sought, is different from the claimed "penalty function." First, Applicant does not provide

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any specific definition of “penalty function” in his argument or how it differs from the steepest descent technique and also fails to provide the alleged document (i.e., the related pages/chapters in the book Nonlinear Programming). Second, in Applicant’s claims, there is no limitation of the art defined in the area of “nonlinear programming” where the term “penalty function” is allegedly defined as a term of art “nonlinear programming”. Third, “finding an optimal path between two given points” is a classic problem of minimization of the cost (emphasize added) of the path; Lorensen clearly states that any conventional Path Planning methods to minimize the cost of the path can be used (column 4, line 67 to column 5, line 1); in this case, the cost of the path, or Lorensen’s example of steepest descent, is indeed Applicant’s penalty of the path.

As per dependent claims 2-3, Lorensen et al further teach wherein the penalty function is responsive to a morphology, which comprises a width of the cavity (col.4, line 39 through col.5, line 15).

As per claim 4, Lorensen et al further teach wherein the morphology is a local morphology (col.6, lines 22-34).

As per claim 5, Lorensen et al further teach wherein the penalty function is responsive to the path (col.4, lines 39-61).

As per claim 6, Lorensen et al further teach wherein the penalty function is response to an amount of local blending of the path (col.4, lines 39-61).

As per claims 7-8, Lorensen et al further teach automatically determining a trajectory of an original of a viewpoint and wherein providing a plurality of points comprises providing a trajectory (col.5, lines 6-15).

As per claim 9, Lorensen et al further teach automatically determining a trajectory of an aiming point (co1.4, line 62 through co1.5, line 5).

As per claim 10, Lorensen et al further teach a step of generating stereo image comprising two separate images taken at different angle (col.5, lines 29-33) which inherently teaches the features as now claimed.

As per claims 1 1-15, Lorensen et al further teach the features as now claimed at co1.4, lines 45-47 and co1.6, lines 22-34.

As per claims 16-24, 26-28, 41-45, 48-49, Lorensen et al further disclose various data processing steps for providing path planning such as specific task (Lorensen's steepest descent or shortest distance), smoothing the path (Lorensen, column 5, lines 6-12), ... which anticipates the features as now claimed.

RESPONSE TO APPLICANT'S ARGUMENTS:

Applicant argues that in claim 48, there is no teachings of "wherein said path does not remain substantially in a medial axis of the cavity and does not approach closer than a predetermined distance to said boundary, in at least two of said bends." First, since Lorensen's path clears away from the obstacles of cavities dependent upon the arrangements of the cavities (column 4, lines 49-57), it does not "remain substantially in a medial axis of the cavity." Furthermore, since all the voxels containing at least a portion of the cavities and their boundaries are not labeled as potential path's elements (column 4, lines 55-57), these voxels prevent the path from approximation of the boundary of all cavities including "at least two of said bends."

Due to the similarity of claims 48-49 and 55-59 to claims 1-4, they are rejected under a similar rationale.

Allowable Subject Matter

Claims 25, 29-40, 46-47, 50-52 and 60-70 are objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 53-54 are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu K. Nguyen whose telephone number is (571) 272 7645. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on (571) 272 7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu K. Nguyen
April 28, 2006


PHU K. NGUYEN
PRIMARY EXAMINER
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